

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings of claims in the application:

LISTING OF CLAIMS:

1-25 (canceled)

26. (new) A method of making a composite material, as well as the material itself, wherein the material contains at least one amphiphilic component and at least one polymer component, the method comprising the following steps:

providing a chemical system comprising the components of at least one polymer, at least one amphiphilic component and a (volatile) solvent or solvent mixture, wherein

- i) the polymer is a homopolymer, a random-, or block-, copolymer or a mixture thereof; and
- ii) the amphiphilic component has the ability to form a bilayer- or monolayer-containing phase; and

by use of a phase diagram, that graphically defines how the components of the chemical system interact in thermodynamically stable phases as a function of temperature, concentration and pressure, removing the solvent(s) from the chemical system by shifting the thermodynamic equilibrium point of said system in a controlled direction based on the phase diagram, thereby obtaining the desired material.

27. (new) The method as claimed in claim 26, wherein the step of removing solvent comprises solvent extraction against a liquid phase containing at least one second solvent.

28.(new) The method as claimed in claim 27, wherein the (volatile) solvent is not completely miscible with said second solvent.

29.(new) The method as claimed in claim 27, wherein the second solvent is water or lower (cyclo)alkanes, such as e.g. cyclohexane or esters.

30.(new) The method as claimed in claim 27, wherein the amphiphilic component/polymer mixture is an emulsion, and the emulsion is injected into an outer second solvent rich-phase, whereby particles are formed as a consequence of solvent removal.

31.(new) The method as claimed in claim 26, wherein the step of removing solvent comprises spraying the mixture, so as to evaporate the solvent.

32.(new) The method as claimed in claim 26, wherein the composite material obtained is one of particles, solid implants, semi-solid, gel-like matrices, or applied for surface coatings.

33.(new) The method as claimed in claim 26, wherein the bilayer- or monolayer-containing phase is in the solid (crystalline) state or arranged in liquid (crystalline) phases such as cubic, sponge, lamellar, hexagonal, micellar or vesicular.

34.(new) The method as claimed in claim 26, wherein the amphiphilic component is selected from synthetic and/or natural polar lipids or other amphiphilic components.

35.(new) The method as claimed in claim 26, wherein the amphiphilic component is anionic, cationic, zwitterionic or uncharged.

36. (new) The method as claimed in claim 26, wherein the amphiphilic component is selected from components having the ability to form a cubic, sponge, lamellar, hexagonal, micellar, or vesicular phase.

37. (new) The method as claimed in claim 26, wherein the amphiphilic component is an uncharged monoglyceride, preferably glycerylmonooleate.

38. (new) The method as claimed in claim 26, wherein the amphiphilic component is selected from monoelaidin, phosphatidylethanolamine, phospholipids and PEGylated phospholipids or sfingolipids, cholesterol, brain- or skin lipids, or other lipid (or amphiphilic component) with the ability to form desired phase.

39. (new) The method as claimed in claim 26, wherein the polymer is partially or completely soluble in organic solvents but not completely soluble in the second solvent.

40. (new) The method as claimed in claim 26, wherein the polymer is a homopolymer selected from poly(lactide), poly(glycolide), poly(p-dioxanone), poly(caprolactone), polyhydroxyalkanoate, polypropylene fumarate, polyorthoesters, polyphosphate esters and polyanhydrides, and combinations of these homopolymers, also modified by e.g. PEG.

41. (new) The method as claimed in claim 26, wherein the polymer is a random or block-copolymer selected from different poly(D,L-lactide-co-glycolide) polymers or other biodegradable or biocompatible copolymers.

42. (new) The method as claimed in claim 26, wherein the volatile solvent is partially miscible or insoluble with water.

43. (new) An implantable, depositable and/or injectable delivery system for sustained delivery of therapeutic active ingredients, comprising a material obtained by the method as claimed in claim 26.

44. (new) A functional food application comprising material obtained by the method as claimed in claim 26

45. (new) A formulation, e.g. particles, for inhalation or oral delivery of therapeutic active substance(s), comprising material obtained by the method as claimed in claim 26.

46. (new) Composite material, comprising a polymer matrix exhibiting at least one domain comprising liquid (crystalline) phase or monolayer phase, said domain is dispersed within or on the surface of the polymer matrix (core/shell).

47. (new) Material as claimed in claim 46, wherein said domains have a micellar or vesicular structure containing at least one second solvent, said structures being located inside said polymer matrix, optionally within voids.

48. (new) Material as claimed in claim 46, in the form of (nano/micro) particles.

49. (new) Material as claimed in claim 46, in the form of solid implants, semi-solid, gel-like matrices, or applied for surface coatings.

50. (new) A concept for either sustained/controlled release of therapeutically active component, or for prolonged/retained activity of sensitive therapeutically active component.